

Claims

1. A coupling system for transfer of an anaesthetic liquid from a bottle (3) to a vaporizer (4), comprising a bottle part (1) comprising a first valve (5, 6) with a first spring-loaded valve body (5) and a first reactive body (6), and a vaporizer part (2) comprising a second valve (10, 11) with a second spring-loaded valve body (10) and a second reactive body (11), the bottle part (1) and the vaporizer part (2) being connectable to each other, whereby the first reactive body (6) is arranged to act on the second spring-loaded valve body (10) in an opening direction, and the second reactive body (11) is arranged to act on the first spring-loaded valve body (5) in an opening direction, to provide a flow-path for the anaesthetic liquid, where-by a seal (7) is arranged between the first valve body (5) and the first reactive body (6) of the bottle part (1), and a further seal (12) is arranged between the second valve body (10) and the second reactive body (11) of the vaporizer part (2), **characterized** in that the seals (7, 12) are positioned and the reactive bodies (6, 11) are arranged so that, when the bottle part (1) and the vaporizer part (2) are coupled together, the seal (7) of the bottle part (1) abuts sealingly against the second reactive body (11), and the seal (12) of the vaporizer part (2) abuts sealingly against the first reactive body (6).
2. A coupling system according to Claim 1, **characterized** in that the distance between the seals (7, 12) and the respective reactive bodies (6, 11) is such that when the bottle part (1) and the vaporizer part (2) are coupled together, the seal (12) of the vaporizer part (2) at first comes into contact with the first reactive body (6).
3. A coupling system according to Claim 1 or 2, **characterized** in that the first valve body (5) has a recess (22).

4. A coupling system according to any of Claims 1-3, characterized in that the second reactive body (11) has a protruding part (23), the shape of which corresponds to the recess (22).
5. A method of hermetically coupling and decoupling a bottle part (1) and a vaporizer part (2), wherein the bottle part (1) comprises a first outer reactive body (6), a first spring-loaded valve (5) and a first inner seal (7) arranged between the a first spring-loaded valve (5) and the first outer reactive body (6), and wherein the vaporizer part (2) comprises a second outer reactive body (11), a second valve body (10), and a second inner seal (12) arranged between the a second valve body (10) and the second outer reactive body (11), characterized in that the method comprising the steps of:

coupling the bottle part (1) and the vaporizer part (2) hermetically together by effecting contact between the first inner seal (7) and second outer reactive body (11), and by effecting contact between the second inner seal (12) and the first outer reactive body (6); and

decoupling the bottle part (1) from the vaporizer part (2) such that, in the bottle part (1), the first spring-loaded valve (5) forms a hermetic seal with the first inner seal (7) and, in the vaporizer part (2), the second valve body (10) forms a hermetic seal with the second inner seal (12) prior to separation of the parts such that any gasses remaining in the bottle part (1) and the vaporizer part (2) are trapped in their respective parts so that virtually no gas is able to escape after the parts are separated.

- 25 6. The method according to claim 5 wherein the decoupling occurs by pulling apart the bottle part (1) from the vaporizer part (2) with sufficient force to separate the parts.
7. The method according to claim 5 wherein coupling occurs by pushing together the bottle part (1) and the vaporizer part (2) such that the outer surface of the

second reactive body (11) being shaped into a form of a protruding part (23),
and the outer surface of the first spring-loaded valve (5) being shaped into a cor-
responding recess (22) are mated in a manner that opens the first spring-loaded
valve (5) and the second reactive body (11) so that gas can freely flow between
the bottle and vaporizer parts.